

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 94-141
NPDES NO. CA0027961

RENEWAL OF WASTE DISCHARGE REQUIREMENTS FOR:

INTERNATIONAL BUSINESS MACHINES CORPORATION
STORAGE SYSTEMS DIVISION
5600 COTTLE ROAD, SAN JOSE
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region,
(hereinafter the Board) finds that:

1. International Business Machines Corporation, Storage Systems Division (hereinafter called the discharger), by application dated June 28, 1993, and revised December 6, 1993, has applied for renewal of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES). The discharger is currently discharging wastes pursuant to Order No. 88-158, adopted by the Board on October 19, 1988, and subsequently amended by Order Nos. 89-104 (June 21, 1989), 89-189 (December 13, 1989), and 91-180 (December 11, 1991). This NPDES permit was administratively extended by Board staff on December 9, 1993.
2. The discharger owns and operates a manufacturing facility located at 5600 Cottle Road, San Jose, Santa Clara County. The facility makes electronic data processing equipment.
3. The discharges from the facility include the following:

Waste Number and Description		Average Annual Flow Rate (mgd)
001	Air-conditioning condensate and fire-protection system testing, discharged to storm drain	0.10
002	Industrial stormwater runoff, discharged to storm drain	0.10
003	Extracted groundwater from on-site and near-site A and B aquifers, discharged to storm drain	0.00
004	Extracted groundwater from on-site and near-site A and B aquifers, reused or recharged to on-site groundwater	0.80
005	Extracted groundwater from off-site B and deeper aquifers,	0.20

	discharged to storm drain	
006	Extracted groundwater from off-site B and deeper aquifers, reused	0.00
007	Intermittent flows from on-site A-aquifer well sampling and aquifer testing, discharged to storm drain	0.00

4. Waste 001: The air conditioning condensate waste stream occurs year round, predominantly in the warmer summer months. This waste is discharged to storm drains at numerous locations on-site. The fire protection system testing water is produced periodically during tests. This waste is also discharged to storm drains at numerous locations on-site. These storm drains are tributary to Canoas Creek.
5. Waste 002: The discharger falls in one of the specific categories of industrial activity for which a stormwater discharge permit is required. On-site facilities which trigger this requirement include: diesel fuel storage, chemical storage, waste conveyance tunnels and collection vaults, acid/caustic storage areas, and electrical substation. Rain water which collects in secondary containment vaults is tested prior to discharge. Depending on test results, the rainwater is discharged to the storm drain, discharged to the storm drain after carbon treatment, treated on-site at the industrial wastewater treatment unit (which discharges to the sanitary sewer), or transported off-site for treatment and disposal. Stormwater runoff from other on-site facilities (e.g. roofs, parking lots, landscaping) is discharged untreated to the storm drain.
6. Wastes 003 through 006: Subsurface investigations have detected various constituents in soil and groundwater at the facility. These include chlorinated hydrocarbons, petroleum naphthas, aromatic hydrocarbons, ketones, and alcohols. The discharger seeks to remediate and prevent further migration of these constituents by groundwater extraction and treatment, both on-site and off-site.

On-site, extracted groundwater is treated by either air-stripping or steam-stripping, depending on the presence of semi-volatile constituents. Treated groundwater is either discharged to storm drains tributary to Canoas Creek (003) or reused (004). Reuse includes on-site irrigation of orchards and landscaping and groundwater recharge. Recharge is accomplished using two up-gradient wells screened in the B-zone; both wells are within the capture zone of IBM extraction wells. Since 1991, 100% of on-site treated groundwater has been reused.

Off-site, extracted groundwater receives is treated by use of nozzles, due to space and access constraints. Treated groundwater is discharged to storm drains tributary to Canoas Creek (005) or reused (006). Reuse includes off-site irrigation or off-site construction (dust control or soil compaction).

7. Waste 007: Intermittent flows are generated from on-site A-aquifer well sampling and aquifer testing. This waste is discharged to the storm drain after testing to assure

that discharge requirements are met.

8. Surface water discharges: Several wastes are discharged via the City of San Jose storm drain system to Canoas Creek, which is tributary to the Guadalupe River flowing to South San Francisco Bay. These wastes enter Canoas Creek at three locations:

Outfall No. and Location	Lat/Long	Wastes Discharged
O-001 Canoas Creek at Cottle Road	37°14'6" 121°48'10"	001, 002, 003, 007
O-002 Canoas Creek at Blossom Hill Road	37°15'2" 121°50'26"	001, 002, 007
O-003 Canoas Creek at West Valley Fwy	37°15'14" 121°50'29"	001, 002, 003, 007
O-004 Canoas Creek at Branham Lane	37°15'56" 121°51'1"	005, 007

9. Basin Plan Requirements: The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Board amended its Basin Plan on September 16, 1992, and the State Board approved it on April 27, 1993, with approval from the State Office of Administrative Law pending. Section 1 of the 1992 Basin Plan amendments, "Implementation of Statewide Plans," was remanded by the State Board on June 16, 1994, due to its reliance on two Statewide Plans that are no longer legally in effect. The Basin Plan identifies beneficial uses and water quality objectives for surface and ground waters in the region, as well as discharge prohibitions intended to protect beneficial uses.

10. Beneficial Uses: The Basin Plan identifies the following existing and potential beneficial uses of Guadalupe River and its tributaries:

- a) water contact and non-contact recreation
- b) wildlife habitat
- c) cold freshwater and warm freshwater habitat
- d) fish migration and fish spawning
- e) groundwater recharge

The Basin Plan identifies the following existing and potential beneficial uses of groundwater underlying and adjacent to the facility:

- a) industrial process water supply

- b) industrial service water supply
- c) municipal and domestic water supply
- d) agricultural water supply

11. Basin Plan Prohibitions: The Basin Plan prohibits discharge of wastewater which has "particular characteristics of concern to beneficial uses" (a) "at any point in San Francisco Bay south of the Dumbarton Bridge" and (b) "at any point where the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water, dead end slough, similar confined water, or any immediate tributary thereof." An exception to these prohibitions is warranted because (i) this discharge is an integral part of a groundwater remediation program and thereby provides a net environmental benefit and (ii) water reuse and reclamation has been optimized.

The Basin Plan prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin." The discharger's groundwater extraction and treatment system and associated operation, maintenance, and monitoring plan constitutes an acceptable control program for minimizing the discharge of toxicants to waters of the State.

12. Regional Board Resolution 88-160: Resolution 88-160 strongly encourages dischargers of extracted groundwater from site cleanup projects to reclaim their effluent, or when not technically or economically feasible, to discharge to a POTW. If neither reclamation nor discharge to a POTW is feasible, and if beneficial uses of the receiving water are not adversely affected, then the Board will approve of the discharge as part of a groundwater cleanup project. This discharge is in compliance with Resolution 88-160, in that reuse has been optimized and discharge to the San Jose/Santa Clara POTW is infeasible.

13. Effluent Limitations

Effluent limits in this permit are based on the plans, policies, and water quality objectives and criteria of the Basin Plan, "Quality Criteria for Water" (EPA 440/5-86-001, 1986 Gold Book), applicable Federal Regulations (40 CFR Parts 122 and 131), the National Toxics Rule (57 FR 60848, December 22, 1992), State and Federal maximum contaminant levels (MCLs), US EPA Region 9 draft guidance (NPDES Permit Limitations for Discharge of Contaminated Groundwater), Best Available Technology Economically Achievable (BAT), and Best Professional Judgement.

Effluent limits for individual VOCs (except 1,1,1-TCA and Freon 113 offsite) are the more stringent of 5 ug/l or the current drinking water standard. The technology to achieve the 5 ug/l maximum is expected to achieve concentrations at or below 0.5 ug/l (the current method detection limit) most of the time. For 1,1,1-TCA and Freon 113 offsite, the effluent limits are 50 ug/l each. These latter limits reflect the

impracticability of most treatment methods for the very large flows produced by off-site extraction wells and the performance constraints of nozzle aeration; these limits are well below applicable drinking water standards.

In the Board's Best Professional Judgement, limited dilution credit (two times the water quality objective) is appropriate in establishing effluent limits for metals, for the following reasons unique to groundwater cleanup discharges. These are temporary discharges, which will cease when groundwater cleanup standards are met. These discharges are likely to often exceed effluent limits for metals which do not provide allowance for dilution, with no feasible way to come into compliance. Source control is not an option since metals are in ambient groundwater, and treatment of low-ppb concentrations of metals is not feasible at numerous small treatment units. Exceedances of water quality standards in receiving waters near these discharges are unlikely and, if present at all, very small in size and duration, due to the relatively small discharge volumes. Finally, these discharges do not contribute significant metals loadings in the region (less than 400 pounds per year, as estimated in the 1993 Board staff study cited above). With respect to mercury, a mass limit in lieu of a concentration limit is appropriate, given that mercury bio-concentrates in fish and shellfish tissue and given that the water quality objective for this constituent is based on human consumption of fish and shellfish. A limit of 1 gram/day represents a *de minimus* level and is consistent with the Board's 1991 general permit for fuels-cleanup discharges.

If violations of effluent limits for metals occur, the discharger will be required to evaluate the feasibility of treatment and/or the impacts of the exceedance to the receiving water. The Executive Officer will consider these evaluations and subsequent actions taken by the discharger when exercising enforcement discretion.

It is the Board's intent to replace concentration limits with mass limits for metals in the future. This will be done on a watershed by watershed basis, thereby assuring that all significant sources in a given watershed are managed properly to protect water quality. The transition to a watershed approach will be possible once non-point sources are better understood.

14. Stormwater: US EPA promulgated federal regulations for stormwater discharges on November 19, 1990. The regulations require specific categories of industrial activities which discharge stormwater associated with industrial activity (industrial storm water) to obtain an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial stormwater discharges (40 CFR Parts 122, 123, and 124). This site discharges industrial stormwater and is subject to these federal regulations.

The Board issued NPDES Permit No. CA0029718 to the Santa Clara Valley Nonpoint

Source Pollution Control Program (the Program) on June 20, 1990. The permit regulates stormwater discharges from public storm drains to surface waters in Santa Clara County. The Program, on November 25, 1991, adopted a "Strategy for Program Coordination of Industrial Storm Water General Permitting Requirements" to assist industries in Santa Clara County in complying with NPDES General Permit No. CAG612001. The Strategy also includes Best Management Practices (BMPs) to be implemented by industrial stormwater dischargers.

15. CEQA: This action is an Order to renew an NPDES permit for an existing surface water discharge. This action is exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 13389 of the California Water Code.
16. The Board has notified dischargers potentially subject to this Order and interested agencies and persons of its intent under Division 7 of the California Water Code to prescribe waste discharge Requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
17. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, that IBM shall comply with the following:

A. Prohibitions

1. The discharge of waste or hazardous materials in a manner which will degrade the water quality or adversely affect beneficial uses of the waters of the State is prohibited.
2. The discharge shall be limited to the waste streams described in the NPDES permit application and added anti-scaling or anti-biofouling chemicals approved by the Executive Officer which do not adversely affect the environment and comply with the requirements of this Order. Discharges of any other wastes are prohibited.
3. Discharge volume shall not exceed the following maximum flow rates (gallons per day) unless an increase in gallons per day is approved by the Executive Officer:

- a. Waste 001 (a/c condensate, fire protection system testing) 100,000
- b. Wastes 003 and 004 combined (on-site treated groundwater) 1,500,000
- c. Wastes 005 and 006 combined (off-site treated groundwater) 3,200,000

4. Stormwater: All discharges of stormwater from the site which cause or contribute to a violation of NPDES Permit No. CA0029718 issued to the Program are prohibited, unless specifically authorized by the Program. Industrial stormwater discharges shall not contain reportable quantities of a hazardous substance listed in 40 CFR Part 117 or Part 302.
5. Discharges authorized by this permit shall not cause or threaten to cause pollution, contamination, or nuisance.

B. Effluent Limitations

The following effluent limits apply to the discharge at the point after full treatment but before the discharger relinquishes control of the discharge (Wastes 001, 003, 005, and 007) or before the discharge is released to waters of the state (Wastes 004 and 006).

1. Waste 001 shall not contain constituents in excess of the following limits:

Constituent	Instantaneous Maximum Limit
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Total dissolved solids	800 mg/l
Total residual chlorine	0.0 mg/l

2. Wastes 003-006 and 007 shall not contain constituents in excess of the following limits:

Constituent	Instantaneous Maximum Limit (ug/l) by Waste:			
	003/007	004	005	006

a. Purgeable Halocarbons (as detected by EPA Method 601 or its equivalent)

1,1,1-Trichloroethane	5	5	50	50
Tetrachloroethylene	5	5	5	5
Trichloroethylene	5	5	5	5
1,1-Dichloroethylene	5	5	5	5
1,2-Dichloroethane	0.5	0.5	0.5	0.5
Vinyl Chloride	0.5	0.5	0.5	0.5
1,2-Dichloroethylene	5	5	5	5
1,1-Dichloroethane	5	5	5	5
Methylene Chloride	5	5	5	5
Chloroform	5	5	5	5
Freon 113	5	5	50	50
Freon 11	5	5	5	5
Freon 12	5	5	5	5
Any other	5	5	5	5

b. Purgeable Aromatics (as detected by EPA Method 602 or its equivalent)

Benzene	1	1	1	1
Toluene	5	5	5	5
Ethylbenzene	5	5	5	5
Total Xylenes	5	5	5	5

c. Total Petroleum Hydrocarbons (by EPA Method 8015 or its equivalent)

TPH	50	50	--	--
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d. Semi-Volatile Organics - Base/Neutral Fraction
(by EPA Method 625 or its equivalent)

Per constituent	5	5	--	--
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e. Inorganics

Arsenic	10	--	10	--
Cadmium	2.2 ¹	--	2.2 ¹	--
Chromium (VI)	22 ²	--	22 ²	--
Copper	23.6 ¹	--	23.6 ¹	--
Lead	6.4 ¹	--	6.4 ¹	--

Nickel	320 ¹	--	320 ¹	--
Selenium	10	--	10	--
Silver	8.2 ¹	--	8.2 ¹	--
Zinc	220 ¹	--	220 ¹	--

¹ assumes hardness = 100 mg/l CaCO₃

² dischargers, at their option, may meet this limit as total chromium

3. Wastes 001-007 shall not contain concentrations of total residual chlorine (free chlorine plus choramines) in excess of 0.0 mg/l (instantaneous maximum limit).
4. Wastes 003 and 005 collectively shall not contain more than 1 gram/day of mercury.
5. The pH of any waste discharge shall not exceed 8.5 nor be less than 6.5.
6. Toxicity: The survival of rainbow trout in 96-hour bioassay of any waste discharge, shall be a three-sample median of 90% survival and shall not be less than 70%.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a) floating, suspended, or deposited macroscopic particulate matter or foam;
 - b) bottom deposits or aquatic growths;
 - c) alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d) visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e) toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause excursions of the following limits in waters of the State in any place within one foot of the water surface:

- a) Dissolved oxygen: 5.0 mg/l minimum.

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation.

- b) pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.

3. This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Clean Water Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Water Reuse Specifications (Wastes 004 and 006 only)

1. No reused water shall be allowed to escape from the authorized use area by airborne spray, nor by surface flow except in minor amounts associated with good irrigation practice, nor from conveyance facilities.
2. Reuse involving irrigation shall not occur when the ground is saturated.
3. Adequate measures shall be taken to minimize public contact with reused water and to prevent the breeding of flies, mosquitos, and other vectors of public health significance during the process of reuse.
4. Appropriate public warnings must be posted to advise the public that the water is not suitable for drinking. Signs must be posted in the area, and all reused water valves and outlets labelled, as appropriate.
5. There shall be no cross-connection between the potable water supply and piping containing treated groundwater intended for reuse.

E. Provisions

1. The discharger shall comply with all sections of this order immediately.
2. The discharger shall comply with the attached Standard Provisions except items C.1, C.2, D.2, D.3, E.5, and E.6.c. With respect to item G.3, composite samples are not required.
3. The discharger shall comply with the attached Self-Monitoring Program.
4. Evaluation of Metals Effluent Limits Violations

If any inorganic effluent limit is exceeded then the discharger shall take three additional samples for that constituent(s) during the following quarter.

Case 1 If the results of the three additional samples for the effluent **do not** exceed the effluent limit(s) the discharger shall report the results to the Executive Officer in the next Self-Monitoring Report, and shall return to the schedule of sampling and analysis in the Self-Monitoring Program.

Case 2 If the results of **any one of the three** additional samples exceed the effluent limit(s), the discharger shall perform the following:

- a) Calculate the median and maximum concentration values for the constituent(s) of concern, using the three recent samples **and** all samples collected and analyzed for that constituent in the previous 12 month period.
- b) Estimate the mass load discharged in the previous 12 month period for the constituent(s) of concern. Report the results in grams per day and in pounds per year, using the average flow rate for the previous 12 month period.
- c) Report the results to the Executive Officer in the next Self-Monitoring Report, and return to the schedule of sampling and analysis in the Self-Monitoring Program.

Case 3 If the results of **two or three** of the additional samples exceed the effluent limit(s), the discharger shall perform the following:

- a) Calculate median and maximum concentration values and mass load for the constituent(s) of concern, as described in Case 2 above.

- b) Perform a cost analysis for treatment of the discharge for the constituent(s) of concern. The analysis should include, but need not be limited to, a discussion of various treatment technologies or pre-treatment filtration options, the cost and technical feasibility of increased treatment to reduce the constituent(s) of concern, and the amount of reduction in terms of concentration and average annual mass load. A joint effort may be undertaken and submitted by more than one discharger to evaluate cost and feasibility of treatment technologies or options.

If the results of the cost analysis indicates that metals treatment of the discharge does not appear to be a feasible option, then:

- c) Perform an evaluation of the potential adverse impacts to the beneficial uses of the receiving water. The evaluation should include, but need not be limited to, description of the beneficial uses specific to the receiving water, physical and chemical characteristics of the water body and sediment, and the physical, chemical, or biological effects from the constituent(s) on the beneficial uses, including effects related to hardness for metals with hardness-dependent objectives.

If exceedances are only for metals with hardness-dependent objectives, then the discharger may conduct a hardness study prior to completing this task. The hardness study should assess receiving water hardness (as CaCO_3) and compute a "no effect" concentration for affected metals, using (i) the minimum of a statistically significant number of hardness samples, and (ii) hardness-dependent formula for US EPA freshwater criteria. If effluent metals concentrations fall below the computed "no effect" concentration, then the discharger need not complete the remainder of this task.

If the receiving water study finds that the discharge is having potential adverse impacts to beneficial uses of the receiving water, then:

- d) Evaluate control measures other than treatment to reduce the constituent(s) of concern in the discharge, such as re-evaluating options for re-use, discharge to POTW, or alternatives to groundwater extraction.
- e) Within 180 days of the discharger receiving results of the consecutive sampling, report the results of tasks (a) through (d)

above to the Executive Officer, including:

- the proposed method to eliminate or minimize future non-compliance, or
- provide a rationale for why no change to the existing program should take place, and
- return to the schedule of sampling and analysis in the Self-Monitoring Program.

The discharger may be required to perform additional evaluations or take additional actions to minimize noncompliance, as deemed necessary by the Executive Officer.

If a violation of the same effluent limit occurs less than 60 months after completion of the required tasks in Cases 1, 2, or 3, then the Executive Officer may waive the evaluation required above. This waiver will not apply if a different inorganic constituent exceeds the effluent limit. In that case, the discharger shall perform an evaluation for that constituent(s).

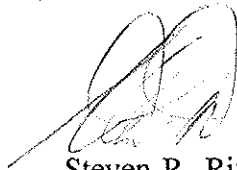
5. Stormwater: The discharger shall prepare a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the attached Standard Provisions (part B). Compliance with the SWPPP shall be an enforceable requirement of this permit.

The discharger shall comply with the lawful requirements of municipalities, drainage districts, and other local agencies regarding discharges to storm water systems or other water courses under such local agencies' jurisdiction. These include all applicable requirements developed by the Program under NPDES Permit No. CA0029718 for the Program, including implementing such Best Management Practices as are identified by the Program as appropriate for this facility, or equivalent practices or control measures. Best Management Practices will be identified in a manual currently under preparation by the Program. Such management practices, and a schedule for their implementation, shall be addressed in the SWPPP.

6. This permit may be modified prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through the Self-Monitoring Program included as part of this Order.
7. This Order expires October 19, 1999. The discharger must file a report of waste discharge in accordance with 23 CCR Subchapter 9 not later than 180 days in advance of this expiration date as application for NPDES permit renewal.

8. This Order shall serve as a general National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Clean Water Act, or amendments thereto, and shall become effective at the end of ten days from date of hearing provided the Regional Administrator, U. S. Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.
9. This order supersedes and rescinds Orders 88-158, 89-104, 89-189, and 91-180.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on October 19, 1994.

A handwritten signature in dark ink, appearing to read 'Steven R. Ritchie', is written over a faint, circular official stamp.

Steven R. Ritchie
Executive Officer

Attachment: Standard Provisions (August 1993)
Self-Monitoring Program (Parts A and B)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF MONITORING PROGRAM

FOR

INTERNATIONAL BUSINESS MACHINES
5600 COTTLE ROAD
SAN JOSE, SANTA CLARA COUNTY

NPDES NO. CA0027961

ORDER NO. 94-141

CONSISTS OF

PART A (AUGUST 1993) AND
PART B (OCTOBER 19, 1994)

SELF-MONITORING PROGRAM
INTERNATIONAL BUSINESS MACHINES
NPDES No. CA0027961

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. Influent

<u>Station</u>	<u>Description</u>
I-003/004	At a point in the on-site groundwater treatment system immediately prior to treatment and discharge/reuse.
I-005/006	At a point in the off-site groundwater treatment system immediately prior to treatment and discharge/reuse (may be more than one such point for multiple off-site treatment units).

B. Effluent

<u>Station</u>	<u>Description</u>
E-001	At a representative point in or before the on-site stormwater conveyance system where air conditioner condensate and/or fire protection testing water are the only wastes present.
E-003/004	At a point in the on-site groundwater treatment system immediately following treatment but before any discharge/reuse.
E-005/006	At a point in the off-site groundwater treatment system immediately following treatment but before any discharge/reuse (may be more than one such point for multiple off-site treatment units).
E-007	At the location(s) where well purge water, aquifer testing water, or well disinfection waste are present but prior to discharge to the storm drain.

C. Receiving Waters

<u>Station</u>	<u>Description</u>
C-001	At a point in Canoas Creek at least 100 feet upstream from the point where waste from the on-site groundwater treatment system discharges

to the creek.

C-002 At a point in Canoas Creek at least 100 feet downstream from the point where waste from the on-site groundwater treatment system discharges to the creek.

C-003 At a point in Canoas Creek at least 100 feet downstream from the point where waste from the off-site groundwater treatment systems discharge to the creek.

C-004 At a point in Canoas Creek 100 feet upstream of its confluence with Guadalupe River.

II. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given below. All samples shall be grab samples:

Parameter or Constituent	I-003 E-001	E-003 I-004	I-005 E-004	E-005 I-006	E-006	E-007	C-001 thru C-004
Flow Rate (gal/day)	I		D		2W	I	
pH (units)	I		M		M	I	A
Dissolved Oxygen (mg/l and % Saturation)						I	A
Temperature (°C)	I		M		M	I	A
Fish Toxicity ¹			A				
Halogenated VOCs (Method 601 ²)		M	M	Q	Q		
Aromatic VOCs (Method 602 ²)		Q	Q	A	A		
Semi-Volatiles (Method 625 ²)		Q	Q				
TPH (Method 8015 ²)		Q	Q				
Metals ³			A		A		
Total residual chlorine (mg/l) ⁵	I		M		M	I	
Total dissolved solids (mg/l)	I		Q		Q	I	A
Standard Observations							A

Key: I = Intermittent⁴ M = Monthly
D = Daily Q = Quarterly
W = Weekly A = Annually
2W = Every 2 weeks

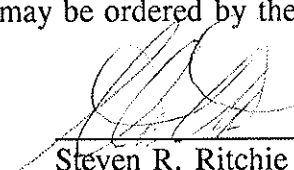
1. Using 96-hour, static bioassay in undiluted waste.
2. Or equivalent method.
3. Maximum method detection limit for metals as follows: cadmium 2 ug/l, mercury 0.2 ug/l, zinc 10 ug/l, and other metals 5 ug/l.
4. At least annually from one location, with number of sampling locations and sampling frequency sufficient to provide representative results.
5. Monitoring only required during and after periods when chlorine is used at facilities tributary to the sampling station.

III. MODIFICATION OF PART A

All items in Part A (August 1993) shall be complied with except: C.2.a, C.3, C.5, D.2-D.5, E.2-E.3, E.5, F.4, and F.5. With respect to section C, composite samples are not required. Section F.4 (submittal of SMRs) is modified to provide for quarterly SMRs due 45 days after the end of the calendar quarter. Section F.5 (annual reports) is modified to allow 45 days after the end of the calendar year for report submittal.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in Regional Board Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 94-141.
2. Was adopted by the Board on October 19, 1994.
3. May be revised by the Executive Officer pursuant to EPA regulations (40 CFR 122.36); other revisions may be ordered by the Board.



Steven R. Ritchie
Executive Officer

Attachment: Part A (August 1993)